

REMARKS

Applicant appreciates the indication of allowable subject matter of previously pending claim 68 in the Notice of Allowance. Applicant became aware of new prior art which is cited herein in an Information Disclosure Statement. Accordingly, Applicant files this RCE to have the claims considered in view of the new art. In addition, Applicant reintroduces new claims 89-124 which correspond to the respective claims 53-59, 81-82, 60-67, 83-84, 68-72, 85-86, 73-80, and 87-88 pending and examined in the Office Action dated October 21, 2002 (hereinafter referred to as the Office Action unless otherwise explicitly identified).

Applicant now addresses the rejections set forth in the Office Action with respect to the new claim numbers. In particular, new claims 89-93, 96-97, 106-107, and 115-124 were rejected under 35 USC 112, first paragraph, claims 89-91, 95, 98-102, 108-111, 113-117, 119-120, and 122 were rejected under 35 USC 102 for anticipation over U.S. Patent No. 5,475,317 to Smith and claims 89-91, 95, 98-102, 108-111, 113-117, 119-120, and 122 were rejected under 35 USC 102 for anticipation over U.S. Patent No. 5,378,311 to Nagayama et al.

Applicant respectfully traverses the rejections and urges allowance of the present application.

Initially, Applicant responds to the prior art rejections over Smith and Nagayama. Referring to the prior art rejections of the Office Action, Applicant notes that the Examiner failed to address arguments presented with respect to the Smith and Nagayama anticipation rejections set forth by Applicant in a previous Office Action Response dated July 29, 2002 (hereinafter the Response unless otherwise explicitly identified). The language set forth in

paragraph 3, on page 3 of the Office Action sets forth the same arguments of the previous Office Action dated March 27, 2002 with no reference to Applicant's previously filed arguments. Applicant filed arguments clearly illustrating why claims 89, 98, 108 and 115 (corresponding to previously pending respective claims 53, 60, 68 and 73) were not properly rejected over Smith or Nagayama.

Applicant respectfully asserts that the Office Action clearly fails the regulatory mandate of 37 CFR 1.104(c)(2) requiring that the pertinence of each reference, if not apparent, must be clearly explained. Applicant previously asserted that the pertinence of Smith or Nagayama was not apparent and no explanation has been provided to date. Accordingly, Applicant requests a basis for applying any reference to the pending claims if such claims are not found to be allowable.

Additionally, Applicant respectfully asserts that the Office Action clearly fails the regulatory mandate of 37 CFR 1.104(b) that the examiner's action will be complete as to all matters. Applicant previously asserted several grounds for allowance that have not been addressed to date.

Applicant described with particularity in the Response the apparent erroneous listing of art or lack of any basis for applying such art to the pending claims. Applicant also described grounds for allowance of pending claims that have not been addressed. Rather, the rejections of the Office Action with respect to the prior art merely repeat word-for-word the rejections of the previous Office Action dated March 27, 2002.

MPEP §706.07 (8th ed.) states that the examiner should never lose sight of the fact that in every case the applicant is entitled to a full and fair hearing, and that a clear issue between applicant and examiner should be developed, if possible, before appeal. Clearly,

it is possible for the Examiner either to develop a clear issue between the Applicant or to allow the claims if the Examiner will correct the noted errors, consider all arguments, and respond to all arguments. Presently, the record for appeal is poor due to the deficiencies of the prior Office Actions. The Office Action fails to follow the enumerated requirements of MPEP §706.07. Previously filed arguments are presented again below for the Examiner's convenience and consideration. Allowance of the claims over the prior art is respectfully requested.

Referring to the prior art rejections, claim 89 stands rejected over Smith and Nagayama. The Action states that Smith discloses a singulated bare die tester. As set forth in the abstract, Smith discloses a reusable test socket for testing singulated bare die. Smith is related to testing of already fabricated devices including singulated bare die. Smith fails to disclose or suggest positively recited limitations of claim 89. For example, the Smith reference fails to teach or suggest the claimed receiving a wafer within a workpiece processing apparatus and processing the wafer within the workpiece processing apparatus as positively set forth in claim 89. Numerous limitations of claim 89 are not shown or suggested by Smith and claim 89 recites patentable subject matter over Smith for at least these reasons.

Regarding the rejection of claim 89 for anticipation by Nagayama, it is stated in the Office Action that the holder of Nagayama includes electrical couplings 57-63 for coupling to the wafer. It is further stated that it appears that the wafer inherently has electrical coupling in which the electrical couplings of the holder connected thereto. Applicant disagrees and Nagayama fails to disclose or suggest limitations of claim 89.

As set forth in column 2, line 58 continuing to column 3, line 44 of Nagayama, it is

clear that DC power sources 59, 60 are utilized to provide DC power to an electrode 53 *buried within insulation member 52* of chuck 51. RF power source 63 is selectively applied or coupled with wafer stage 55 via a switch 61. Selective application of DC power and RF bias to a chuck in a wafer stage fails to disclose or suggest *communicating signals intermediate circuitry of a wafer and circuitry of a workpiece holder* as recited in claim 89. Furthermore, Nagayama fails to teach or suggest *coupling circuitry of a wafer with circuitry of a workpiece holder*. Wafer 54 of Nagayama is entirely devoid of any circuitry of a wafer or the claimed coupling. Positively recited limitations of claim 89 are not shown or suggested and claim 89 is allowable over Nagayama.

In addition, Applicant objects to the reliance upon inherency set forth in support of the rejection of claim 89 over Nagayama. In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics *necessarily* flows from the teachings of the applied prior art. *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). Coupling of circuitry of the wafer is not disclosed or suggested by Nagayama, and does not necessarily flow from the teachings of Nagayama. The Nagayama reference merely discloses a wafer with no teaching or suggestion of the claimed coupling circuitry of the wafer with circuitry of the workpiece holder. The reliance upon inherency is misplaced and claim 89 is patentable over Nagayama.

The claims which depend from independent claim 89 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Claim 95 recites contacting circuitry of the wafer and circuitry of the workpiece holder.

Smith fails to disclose or suggest wafer teachings, circuitry of a wafer, or contacting circuitry of the wafer with circuitry of a workpiece holder. In addition, Nagayama provides absolutely no teaching or suggestion of contacting circuitry of a wafer with circuitry of the workpiece holder. Further, no teachings are identified in the Office Action as allegedly disclosing or suggesting the claimed contacting. Claim 95 recites limitations not shown or suggested in the prior art and claim 95 is allowable for at least this reason.

Referring to independent claim 98, Smith relates to testing of singulated bare die. The abstract of Smith refers to a reusable test socket for testing singulated bare die to determine before packaging that the bare die is a known good die. Smith fails to disclose or suggest any processing of a workpiece within a workpiece processing apparatus to form a semiconductor device and communicating signals intermediate a workpiece and the workpiece processing apparatus as recited in claim 98. Claim 98 recites limitations not shown or suggested in Smith and claim 98 is allowable over Smith for at least this reason.

Nagayama fails to disclose or suggest any communication of signals intermediate the workpiece and the workpiece processing apparatus as recited in claim 98. Application of DC power to a chuck 51 and RF power to chuck 51 fails to disclose or suggest communication of signals intermediate a workpiece and a workpiece processing apparatus as positively recited in claim 98. Claim 98 recites limitations not shown or suggested in the prior art and claim 98 is allowable for at least this reason.

The claims which depend from independent claim 98 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

For example, claim 99 recites *electrically coupling* the workpiece and the workpiece

processing apparatus. Nagayama fails to disclose or suggest any electrical coupling of the workpiece and the workpiece processing apparatus. Claim 99 is allowable over Nagayama for at least this additional reason.

Claim 101 recites coupling circuitry of the workpiece and circuitry of the workpiece holder at a surface of the workpiece and a surface of the workpiece holder. Nagayama fails to disclose or suggest any coupling of circuitry of the workpiece with circuitry of the workpiece holder as recited in claim 101, and claim 101 is allowable over Nagayama for at least this additional reason.

Claim 102 recites receiving the workpiece comprising a semiconductive wafer. Smith clearly pertains to bare die and fails to disclose or suggest receiving a semiconductor wafer within a workpiece processing apparatus. Claim 102 recites limitations not shown or suggested in Smith and claim 102 is allowable over Smith for at least this additional reason.

With respect to claim 108, Smith fails to disclose or suggest supporting a wafer using a workpiece holder as positively recited in claim 108. The bare die of Smith in no fair interpretation discloses or suggests supporting a wafer using a workpiece holder as recited in claim 108. Claim 108 recites limitations not shown or suggested in Smith and claim 108 is allowable over Smith for at least this reason.

Nagayama fails to disclose or suggest coupling circuitry of a wafer with circuitry of a workpiece holder and communicating signals intermediate the circuitry of the wafer and the circuitry of the workpiece holder. Positively limitations of claim 108 are not shown or suggested in Nagayama and claim 108 is allowable over Nagayama for at least reason.

The claims which depend from independent claim 108 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their

own respective features which are neither shown nor suggested by the cited art.

Applicant added new claims 113-114 in the Response (previously claims 85-86). In the Office Action it was stated on page 3 with respect to previous claims 81-88 that it appears that the communicating signals would include information and this information could be related to the defect due to the process of the wafer. Initially, such statement is irrelevant to claims 96, 97, 106, 107 and 123-124 inasmuch as such claims were not rejected over Nagayama.

Nonetheless, Nagayama is devoid of any teaching or suggestion of the claimed communicating signals and the Examiner has failed to identify any teachings which allegedly correspond to the claimed limitations contrary to the CFR and MPEP authority. Further, Applicant traverses the statements of the Office Action that it **appears** the signals **would** include information, and the information **could be** related to a defect. Claims 96-97 stand rejected under 102. Applicant notes the requirements of MPEP §2131, which states that "TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM." This MPEP section further states that "'A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.' *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). 'The identical invention must be shown in as complete detail as is contained in the ... claim.' *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an ipsissimis verbis test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990)." It is clear from the Examiner's own statements that Nagayama fails as an anticipatory reference of claims

113-114 and such claims are allowable. No communicating signals intermediate circuitry of the wafer and circuitry of the workpiece holder is disclosed or suggested, let alone communication of signals comprising information, or information regarding the processing of the wafer. Numerous limitations of claim 113-114 are not shown nor suggested and the claims are in condition for allowance.

With respect to claim 115, Smith fails to disclose or suggest providing a workpiece processing apparatus adapted to process a workpiece to form a semiconductive device as positively recited in claim 115. The apparatus of Smith merely provides testing prior to packaging to determine whether a die is a known good die. Such teachings regarding testing fail to disclose or suggest provision of a workpiece processing apparatus adapted to process a workpiece to form a semiconductor device as positively recited in claim 115. Further, Smith also fails to disclose or suggest providing a workpiece within the workpiece processing apparatus and receiving signals within the workpiece processing apparatus from the workpiece as positively recited in claim 115. Numerous limitations of claim 115 are not shown or suggested in Smith and claim 115 is allowable over Smith for at least these reason.

Nagayama fails to disclose or suggest *communication of signals using a workpiece* and receiving the signals within a workpiece processing apparatus from the workpiece. Application of DC and RF power to a chuck fail to disclose or suggest communication of signals using the workpiece and receiving the signals within the workpiece processing apparatus from the workpiece as specified in claim 115. Numerous limitations of claim 115 are not shown or suggested in Nagayama and claim 115 is allowable over Nagayama for at least these reasons. Applicant respectfully requests allowance of claim 115 in the next

Action.

The claims which depend from independent claim 115 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

In the event that a rejection of the claims is maintained with respect to the prior art, or a new rejection made, Applicant respectfully request identification in such asserted references of elements which allegedly correspond to limitations of the claims in accordance with 37 C.F.R §1.104(c)(2). In particular, 37 C.F.R §1.104(c)(2) provides that *the pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified*. Further, 37 C.F.R. §1.104(c)(2) states that the Examiner must cite the best references at their command. When a reference is complex or shows or describes inventions other than that claimed by Applicant, the particular teachings relied upon must be designated as nearly as practicable. The pertinence of each reference if not apparent must be clearly explained for each rejected claim specified. Applicant respectfully request clarification of the rejections with respect to specific references and specific references teachings therein pursuant to 37 C.F.R. §1.104(c)(2) in a non-final Action if any claims are not found to be allowable.

Similarly, the Office Action fails to comply with the CFR and MPEP with respect to the 112, first paragraph rejections, and is not complete as to all matters. The Office Action on page 3 baldly states Applicant fails to provide specific support of the independent claims in the instant specification. Applicant disagrees and refers the Examiner to the Response regarding the instant specification wherein it was stated:

The specification includes numerous teachings of processing workpieces and wafers.

For example, page two of the application refers to chemically amplified resists which are utilized in deep ultraviolet (DUV) lithography and small micron geometries. Also on page 2, lines 8-12, it is stated that workpiece temperature and workpiece temperature uniformity are parameters which are closely monitored during wafer and workpiece fabrication. As set forth on page 4 of the specification, exemplary sensors include resistance temperature devices configured to provide process signals containing process information regarding the electronic device workpiece processing apparatus. As set forth on page 2, lines 22-24, temperature sensors across the surface of a wafer are utilized to provide temperature mapping of a workpiece during processing. On page 7, lines 13-19, it is stated that workpieces typically undergo processing from which subsequent devices are formed. Exemplary workpieces include semiconductor wafers, glass or quartz substrates for flat panel or field emission display devices. It is also stated on page 7 that typical production workpieces are processed and subsequently utilized to form products used in a variety of electronic devices. On page 9, lines 4-8, it is stated that process signals provided by sensors 23 and corresponding to processing conditions of workpiece 21 are received within data gathering device 14. Alterations to processing conditions of apparatus 10 can be changed responsive to the reception of the process signals within device 14. On page 16, lines 7-9, it is stated that chuck 40 is isolated to a greater extent from a processing environment utilized to fabricate or process electronic device workpieces. On page 17, lines 3-6, it is stated that one configuration of apparatus 10 of Fig. 6 enables processing of production workpieces while monitoring processing conditions using calibration workpiece 20. Referring to page 19, lines 12-19, it is stated that layer 28 operates to protect surface 21, sensor 23, and electrical connection 27 from the processing environment including

gases, chemicals, plasmas, etc. utilized during processing of electronic device workpieces.

The Response further traversed the unsupported allegation of the Office Action that the specification does not have support for limitations of claims 89, 98 and 115. As identified above, the originally filed specification is replete with teachings of processing a workpiece, such as a wafer, within a workpiece processing apparatus to form at least one semiconductor device, processing a workpiece within the workpiece processing apparatus to form a semiconductor device and providing a workpiece processing apparatus (see reference 10 of the originally-filed specification) adapted to process a workpiece to form a semiconductor device. The disclosure of the originally filed specification provides support for the claimed subject matter especially with reference to the disclosed exemplary embodiments of electronic device workpiece processing apparatus 10 and processing of workpieces 20 as described in the originally filed specification.

These teachings alone evidence support of all claims in the original specification and figures and the inappropriateness of the 112, first paragraph rejection. Additionally, Applicant referred the Examiner to U.S. Patent Application Serial No. 09/032,184 incorporated into the subject application by reference as set forth on page 3, lines 9-15 of the originally filed specification. Serial No. 09/032,184 includes additional teachings providing support for the pending claims. The Examiner, with no explanation, states in the Office Action that the '184 application **appears** to have no sufficient support. The Examiner is mistaken.

For example, Applicant refers the Examiner to the following teachings on page 17, line 11 - page 18, line 17 of the '184 application providing:

In some embodiments, the described electronic device workpiece is

configured and utilized as a calibration wafer. Such calibration wafers are typically placed within a workpiece processing chamber and the chamber can be brought up to subject processing conditions at typical elevated temperatures. Through the use of an electronic device workpiece configured as a calibration wafer, the temperature at various positions upon electronic device workpieces to be processed can be determined. Thereafter, data provided by temperature sensing devices located upon the electronic device workpiece can be utilized to provide temperature control and modify some aspect of the processing chamber.

The processing chamber is preferably modified to provide a uniform temperature distribution across the entire surface of the electronic device workpiece being processed. In other processes, the processing chamber is modified to provide varied temperatures across a surface of the workpiece. The modifications can be made with the calibration workpiece in place within the processing chamber. The effect of such modifications can be verified by the temperature sensing devices and associated temperature monitoring equipment coupled with the devices. Thereafter, the calibration workpiece is removed and the equipment having been desirably calibrated can be utilized to process other electronic device workpieces in mass.

In another embodiment, temperature sensing devices are provided upon an electronic device workpiece which will actually be processed and subsequently utilized to fabricate integrated circuitry or other components.

The temperature sensing devices can be fabricated upon the electronic

device workpiece during the fabrication of the electronic device workpiece.

In another embodiment, preexisting or prefabricated temperature sensing devices are positioned and adhered upon the electronic device workpiece.

Additional teachings providing support in the '184 application may be found at page 1, line 10 - page 3, line 9; page 5, lines 1-4; page 6, lines 11-19; page 14, line 14 - page 15, line 4; page 11, lines 13-22; and page 15, line 21 - page 16, line 15.

Further regarding the rejection based on §112, first paragraph, the Examiner is respectfully reminded that MPEP §2163.02 (8th Edition) states **the test for sufficiency of support in a application is whether the disclosure relied upon “reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter.”** MPEP §2163.02 (8th Edition) *citing Ralston Purina Co. v Far-Mar-Co., Inc.*, 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985). Notably, the subject matter of the claim need not be described literally (i.e., **using the same terms** or *in haec verba*) in order for the disclosure to satisfy the description requirement. MPEP §2163.02 (8th Edition).

The Examiner is respectfully reminded that MPEP §2163 I. (8th Edition) states it is now well accepted that a satisfactory description may be in the claims or any other portion of the originally-filed specification and an applicant shows possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention (citations omitted). The claims are supported by the originally filed application.

MPEP Section 2163.07(a) (8th ed.) states that *by disclosing in a patent application*

a device that inherently performs a function or has a property, operates according to a theory or has an advantage, a patent application necessarily discloses that function, theory or advantage, even though it says nothing explicit concerning it. The application may later be amended to recite the function, theory or advantage without introducing prohibited new matter. In re Reynolds, 443 F.2d 384, 170 USPQ 94 (CCPA 1971); In re Smythe, 480 F.2d 1376, 178 USPQ 279 (CCPA 1973).

It is clear Applicant has disclosed a workpiece or wafer processing apparatus (e.g., reference 10 of the originally-filed specification) that inherently performs the function of processing workpieces or wafers. In accordance with the MPEP, Applicant's claiming of the function of apparatus 10 is not new matter.

Applicant note MPEP 2163 II. A. (8th ed.), states *the Examiner has the **initial burden**, after a thorough reading and evaluation of the content of the application, of **presenting evidence or reasons** why a person skilled in the art would not recognize that the written description of the invention provides support for the new claims.* Further, it is stated that if applicant points out where a claim is supported, the Examiner has the initial burden of presenting evidence or reasoning to explain why persons skilled in the art would not recognize in the disclosure a description of the invention defined in the claims.

Further, MPEP §2163.111.A (8th ed.) provides:

In rejecting a claim, the examiner must set forth express findings of fact regarding the above analysis which support the lack of written description conclusion. These findings should:

(A) Identify the claim limitation at issue; and

(B) Establish a *prima facie* case by providing reasons why a

person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed in view of the disclosure of the application as filed. A general allegation of "unpredictability in the art" is not a sufficient reason to support a rejection for lack of adequate written description.

The Office Action merely states "it appears that the specification does not have support for the limitations" ***with no evidence or reasoning***. Such fails the clear mandate of the MPEP. Applicant respectfully requests withdrawal of the 35 USC §112, first paragraph rejection for at least the above numerous reasons. If such rejection is not withdrawn Applicant requests clarification of the 112, first paragraph, rejection in a **non-Final Action** so Applicant may appropriately respond.

Once again, Applicant submits a copy of a Form PTO-1449 properly submitted with an IDS on 4/2/01. Reference AE has not been initialed indicating consideration thereof by the Examiner. The reference was properly submitted for consideration and Applicant again respectfully requests initialization of reference AE and return of the initialed form to Applicant.

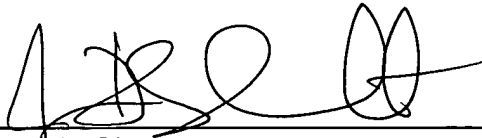
Applicant also submits a new IDS herewith.

Applicant requests allowance of all pending claims.

The Examiner is requested to phone the undersigned if the Examiner believes such would facilitate prosecution of the present application. The undersigned is available for telephone consultation at any time during normal business hours (Pacific Time Zone).

Respectfully submitted,

Dated: 6/19/03

By: 
James D. Shaurette
Reg. No. 39,833